



Australian Seed Federation

Submission to the

Issues paper released by the

Advisory Council on Intellectual Property

For

The review of Patentable subject matter

SEPTEMBER 2009

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Executive Summary

The key points in this submission for the Advisory Council on Intellectual Property (ACIP) to consider include:

- The ASF disagrees with the view expressed which indicates the “primary area of concern has been that patents are being granted which hinder innovation, investment and public access to new technologies rather than promote such activities”,¹
- The ASF disagrees with the view expressed that the PBR system “provided protection for plant varieties...”²
- The ASF disagrees with the view that there “was the potential for significant overlap of subject matter that may be protected by both the innovation patent and PBR systems”,³
- The ASF disagrees with the view expressed that the reason plants should be excluded is to avoid the “innovation patent interfering with Plant Breeder’s Rights....”,⁴

The ASF therefore recommends to ACIP that it considers the following issues:

- The *PBR Act*, in its current form, is not sufficient to enable PBR owners to achieve adequate protection, and enforcement in a manner which is cost effective, timely and most importantly enforceable,
- The *PBR Act* is dated, is often described as “dysfunctional” and it creates unnecessary confusion for all involved,
- The inclusion of biological matter as an innovation patentable matter is now more relevant than ever, due to the changes in the plant breeding industry, the cost of bringing varieties to market, and the lack of enforcement,
- The innovation patent and the *PBR Act* should be viewed as being complimentary and not competitive, and improvements to the innovation patent will not interfere with the operations of the *PBR Act*,
- An improvement in the innovation patent will assist in promoting a profitable and competitive plant breeding industry in Australia by protecting the processes used in developing new plant varieties and for example, helping bring greater clarity to the extremely important issue of essential derivation,
- An improvement in the innovation patent will assist in encouraging the ASF membership to continue to invest in the areas of science, innovation and technology, and will assist in enabling Australian plant industries to access the latest international technologies and germplasm,
- The ASF also encourages ACIP to consider the importance of encouraging this continued investment in assisting Australian agriculture to meet the challenges of, climate change and food security, both in terms of meeting domestic needs and realising opportunities for Australian agriculture to contribute to global solutions, and
- The ASF is also seeking to enter into a consultation process with ACIP in relation to this Review.

*“investment in plant and animal genetics may be able to diminish the loss of productivity associated with higher temperatures and changing rainfall patterns”.*⁵

¹ ACIP Issues Paper – page 4

² ACIP Issues Paper – page 53

³ ACIP Issues Paper – page 53

⁴ ACIP Issues Paper – page 29

⁵ Garnaut Climate Change Review draft - page 34

Background

The ASF is the peak national body representing the interests of Australia's sowing seed industry at the state, national and international level. Members of the ASF have an estimated annual turnover in sowing seed sales of approximately A\$1.2 billion.

The membership of the ASF can be found at <http://www.asf.asn.au>.

The membership of the ASF comprises stakeholders from all sectors of the total seed supply chain including plant breeders, seed growers, seed processors, and covers a diversity of geography, climate, crops, and cultivars.

Introduction

The ASF welcomes the opportunity to provide comments to the ACIP review on patentable matter and notes the economic objective of the patent system is to “benefit society through optimising innovation and public access to new technologies”.⁶

ACIP needs to be aware that Australia's sowing seed industry requires stronger intellectual property protection because of the recent shift from the public research agencies and the universities, to the private sector.

The plant breeding industry must therefore be considered as being very relevant to the ACIP review because the members of ASF are substantial investors in Australian agriculture. This investment benefits society, allows innovation to occur, and ultimately provides Australian agriculture with direct access to novel genes, and new and conventional technologies, which are often the property of offshore and/or global corporations.

This investment is also an important factor in increasing the sustainability and productivity of Australian agriculture through the development of improved varieties and also assists in underpinning our economy and our international competitiveness.

The ASF notes that ACIP previously “recommended that the innovation patent cover the same subject matter as the standard patent”.⁷ The ASF understands that the Australian Government response to the ACIP report agreed with this recommendation and noted that the Government agrees that the same subject matter protectable under a standard patent should be protectable under the innovation patent”⁸.

Accordingly, the ASF continues to support the view that because plant material is protectable under the standard patent, it should also be protectable under the innovation patent.

The ASF was extremely disappointed with what we understand to be an intervention, immediately prior to the *Innovation Patent Bill* going before Parliament that resulted in the exclusion of plant materials from the scope of innovation patents.

The ASF contends this exclusion was implemented without industry consultation.

⁶ ACIP Issues paper – page 1

⁷ SIAA Submission to the issues paper supporting the inclusion of plant material in the innovation patent – page 2

⁸ SIAA submission to the issues paper supporting the inclusion of plant material in the innovation patent – page 2

The Innovation Patent System

The innovation patent system, as understood by the ASF, is unique to Australia and therefore has the potential to provide plant breeders', both domestically and internationally, with an added incentive to invest in Australian plant breeding programs. This is because it has the real potential to offer a much wider protection than PBR, in its current form.

The ASF strongly encourages ACIP to consider the fact that Australia cannot afford to overlook the potential benefits of direct private investment in Australian agriculture.

While this may continue to be a "blend" of foreign and domestic investment, it will be critical to the future capacity of the seed sector to service agriculture production in Australia.

While the Australian market for broad acre agriculture technologies, included those delivered in seed, could be viewed as relatively small, it is technologically sophisticated and needs to be protected.

The unique nature of many of the science and technology challenges facing Australian agriculture, and the limited capacity of public and private research and development to address these, means that access to proprietary technologies and financial support from international companies is an essential part of the mix, and needs to be encouraged.

The ASF believes the innovation patent offers a real means for the Australian seed industry sector to compete with larger and thus the more attractive markets and to secure funding for research and product development.

The innovation patent also provides the opportunity for a "faster, broader and cheaper form of patent right for unique Australian inventions", when compared to PBR and/or the standard patent, especially when only short term protection is required in the public interest. This is important because there are many examples of the average life cycle of an annual species plant variety being rarely more than ten years.

Because Australian plant breeders are largely classified into small and medium sized business enterprises, the innovation patent is also well suited for Australia. If available, it would be more affordable to the majority of plant breeders when compared to the standard patent.

Australia is also seen as an attractive proposition for potential investors located here and abroad as its intellectual property regime is consistent with the World Trade Organisation's (WTO) Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

The ASF has also always maintained a broad view on the range of subject matter that should qualify for the innovation patent.

This is why the ASF continues to advocate the position that because plant material is protectable under the standard patent, it should also be protectable under the innovation patent.

Access to an innovation patent by plant breeders will only strengthen the incentive to inject capital into Australian plant breeding programs.

Plant Breeder's Rights and Patents

"We would suggest that plant breeder's rights have more in common with patents than any other form of intellectual property and that broader standing provisions could prove helpful in enforcement proceedings".⁹

PBR is used to protect new varieties of plants by providing exclusive commercial rights to market a new variety or its reproductive material.

PBR therefore provides an owner with the right to direct the production, sale and distribution of the new variety, receive royalties from the sale of plants or to sell their rights, if it is their choice to do so.

PBR also differs from a patent because it does not require the plant or method of producing it to be novel, inventive or fulfil the criteria of patentability.

The ASF is therefore very concerned with the views expressed in the ACIP issues paper, including that:

- PBR "provided protection for plant varieties....",¹⁰
- the reason for this exclusion is to "avoid the innovation patent interfering with Plant Breeder's Rights",¹¹
- there "was the potential for significant overlap of subject matter that may be protected by both the innovation patent and PBR systems",¹² and
- introducing "innovation patent production without including specific exceptions would reduce many of the advantages for breeders of having innovation patent protection"¹³, and
- it has been argued that biological materials "should not be patented because the power this gives to patent owners is out of proportion with the contribution they provide to society".¹⁴

Further information in relation to the ASF's views and concerns in relation the *PBR Act* are outlined in our submission to the Review of Enforcement of Plant Breeder's Rights currently being undertaken by ACIP.

This can be located at www.acip.gov.au/pbr_options_subs/Australian%20Seed%20Federation.pdf

In this submission, the ASF has clearly outlined that the *PBR Act*, in its current form, is not sufficient to enable PBR owners to achieve adequate protection, and enforcement in a manner which is cost effective, timely and most importantly enforceable, especially for unique traits in plant CVs.

"In order for the Act to be effective it must be possible to protect or enforce those rights. However, enforcement of plant breeder's rights continues to be a problem, not only in the pasture seeds industry but throughout the horticulture and grain industries as well."¹⁵

The ASF is therefore seeking substantial changes to be made to the *PBR Act* to ensure there are appropriate mechanisms in place for members to achieve protection and enforcement that is cost effective, timely and enforceable.

⁹ RIRDC – Plant Breeder's Rights and Contract Growing in the Pasture Seed Industry, 2007 – page 15

¹⁰ ACIP Issues Paper – page 53

¹¹ ACIP Issues Paper – Page 29

¹² ACIP Issues Paper – Page 53

¹³ ACIP Issues Paper – Page 53

¹⁴ ACIP Issues Paper – Page 4

¹⁵ RIRDC Plant Breeder's Rights and Contract Growing in the Pasture Seed Industry, 2007 – page 14

This will assist in providing greater certainty to the industry by ensuring that investment can occur with the knowledge that intellectual property rights will be upheld.

The ASF is also seeking changes to the *PBR Act* because it is dated, is often described as “dysfunctional”, and it creates unnecessary confusion for all involved.

*The reasons they gave for this were that PBR was too slow, too unpredictable and too difficult to enforce.*¹⁶

It is vitally important for PBR owners to have in place an accessible and effective PBR enforcement system to ensure their investments can be protected through an appropriate and recognised legal channel

*The cost of taking a civil action can be prohibitive.*¹⁷

The ASF believes the innovation patent system and the PBR system can be complementary and not competitive, and will continue to be with the inclusion of plant material in the innovation patent.

The innovation patent offers the added benefits over PBR by protecting the processes used in developing new plant varieties and helping bring greater clarity to the extremely important issue of “essential derivation”.

This would be achieved by providing greater protection to the “originating breeder” because the scope of coverage under the innovation patent is broader than PBR.

*“...however EPR collection rates are poor and are not at present contributed to any great extent”.*¹⁸

The ASF also outlined in this submission that the complexities involved for the collection of end point royalties (EPR) as being another critical issue which requires attention.

*“...discussion amongst commercialising agents and breeders suggests that it is less than 50%”.*¹⁹

Improvements in the working environment of the innovation patent, PBR and EPR are all critical factors for the plant breeding industry. Otherwise it will continue to operate in an environment of uncertainty, which will ultimately degrade the incentive for plant breeding, due to the large investment costs involved.

Research and development implications

There is considerable research and development activity in industry sectors associated with plant subject matter in Australia, and particularly in the agriculture industry.

While much of this is public sector activity, the ASF’s aim is to encourage industry and government/s to seek to increase the success rates in achieving practical and commercial outcomes.

The ASF is also seeking to ensure that when a potentially useful application is developed, the intellectual property and management issues are “ironed out” to limit the conflicted and confusing pathways to market.

This will also greatly assist in eliminating the unnecessary intellectual property management barriers, which slow market adoption and implementation.

¹⁶ RIRDC – Plant Breeder’s Rights and Contract Growing in the pasture seed industry, 2007 – page 19

¹⁷ RIRDC, Plant Breeder’s Rights and Contract Growing in the Pasture Seed Industry, 2007 – page 15

¹⁸ <http://www.seedquest.com/forum/c/ColesDonald/07jul.htm> - July 2007

¹⁹ <http://www.seedquest.com/forum/c/ColesDonald/07jul.htm> - July 2007

There are numerous examples in the seed research and development sector where such unnecessary hurdles are in place and are hindering the transfer and application of intellectual property across organisational boundaries. This would be possible, if simpler clearer rights were in place which encourages practical and sound commercial arrangements.

Also, while restrictions may prevent some inventions from proceeding under the innovation patent system, there does not seem to be any benefit to the patent holder or the industry by having such restrictions in place.

The ASF is also concerned regarding the view expressed in the issues paper which indicates the “primary area of concern has been that patents are being granted which hinder innovation, investment and public access to new technologies rather than promote such activities”.²⁰

Contrary to this, the ASF has previously, and continues to argue that the cost of exclusion in the innovation patent actually includes:

- a missed opportunity for protection,
- forgone research and development opportunity in Australian agriculture, including the loss of real commercial opportunities, including offshore licence income for traits with application and value outside of Australia,
- higher costs of obtaining protection,
- reducing Australia’s ability to compete internationally if investors release their technology to our competitors, and
- a diametrically opposed system for addressing “essential derivation”.

ACIP Questions

Question 1 – Economic objectives of limiting patentable subject matter.

Can placing limits on inherently patentable subject matter be justified on economic grounds?

Should the subject matter of each individual invention be assessed to determine whether a patent is necessary to encourage innovation, or should such an assessment be done for entire fields of technology?

The ASF is of the view that licences can always be granted to enable access. The normal process in Australia and overseas with patented genes, has been for wide-spread and in most, but not all cases, royalty bearing licensing. The ASF believes this is rational commercial behaviour which best serves the patent holders’ commercial interests.

However because of the size of the Australian market, and unless innovation can be protected in order to return a dividend to the originator, it will not become available to Australian agriculture until it has succeeded off-shore. This will put Australia at a distinct competitive disadvantage.

²⁰ ACIP Issues Paper – Page 4

Question 2 – Economic effect of inherent patentability test.

What would be the consequences on innovation of imposing or removing limits on patentable subject matter? Are you aware of any empirical data on such consequences?

The ASF would welcome the opportunity to further discuss this issue with ACIP, because the ASF's view is that by imposing unnecessary restrictions it will only have the effect of constraining much needed innovation.

Question 3 – Ethical reasons for limiting patentable subject matter (Part 4).

Can placing limits on inherently patentable subject matter be justified on ethical grounds? Is it appropriate for legislation to predetermine ethical limitations on patentable subject matter, or is it more appropriate for courts to determine such limitations on a case-by-case basis?

The ASF is seeking a balanced and transparent avenue, and basis to be in place for a decision to be made regarding patentable subject matter. People and their representatives in Parliament for example, should have the option to debate any ethical limitations on identifiable patent subject matter, such as genes. The Courts would then be the vehicle for referring to the interpretation of the debate and legislation.

The ASF does not believe the “agencies” have a role to play in this area.

For example, how does ACIP currently interpret the Office of Gene Technology Regulator's role and decision making process in approving genetically modified organisms in Australia, in relation to the implied need for consideration of ethical grounds in the approval process?

Is patent law an appropriate avenue for dealing with ethical issues? If not, what is an appropriate avenue?

The ASF's current view is that patent law is an appropriate avenue and would welcome the opportunity to consult further with ACIP on this matter.

Question 4 – Ethical effect of inherent patentability test.

What would be the ethical consequences of imposing or removing limits on patentable subject matter? Are you aware of any examples of such consequences?

The ASF is not currently aware of any published examples and would welcome the opportunity to discuss this further with ACIP if they have any examples.

Question 5 – Other reasons for limiting patentable subject matter.

Other than economics, ethics and national security, can placing limits on inherently patentable subject matter be justified on any other grounds?

The ASF is of the view that the commercial, diversified and mature market place and ultimately the Courts should decide if they are required to do so.

Question 6 – Content and structure of current Australian law

Does the content of current Australian law meet the objectives of the system? Are decision makers focusing on the appropriate principles?

Is the legislative structure of current law appropriate for the content?

Is the current law clear to decision makers and users of the system? Does the content or structure of the current test cause you any significant problems?

The ASF encourages decision makers to focus on the principle that the cost of exclusion in the innovation patent actually includes:

- a missed opportunity for protection and achieving reasonable commercial returns from investment in research and development,
- forgone research and development opportunity in Australian agriculture,
- higher cost of obtaining protection,
- reducing Australia’s ability to compete internationally if investors release their technology to our competitors, and
- a diametrically opposed system for addressing “essential derivation”.

Question 7– Issues with current Australian law

Do you have any comments on issues A to H identified in Part 11.3.1?

- **combination of flexible and proscriptive tests**
- **value of existing body of case law**
- **general inconvenience, mischievous to the state and hurt of trade**
- **archaic language**
- **threshold of inventiveness**
- **threshold of utility**
- **scope of rights awarded**
- **requirement for grant**

The ASF would welcome the opportunity to provide names of members of the legal fraternity who can give advice and briefings from a plant breeders and proprietary seed marketers’ perspective.

These specialised practitioners would add considerable experience and assistance in relation to these matters.

The ASF also recommends that further consideration be given to the establishment of an expert panel to deal with the issues raised above and to assist with clarification and intent.

The ASF recommends that it is represented on the expert panel, and is consulted during its formation, because the ASF represents all sectors of the seed supply chain including plant breeders.

Question 8 – International integration

Is it more important to achieve best practice or to harmonise with a major jurisdiction? Are any jurisdictions preferable over others?

The ASF’s current view is that it is preferable to have “best practice”.

Question 9 – International compliance of current Australian law

Is current Australian law compliant with our international obligations?

The ASF would like to consult further with ACIP in relation to this issue, because in “in principle”, the ASF’s current view is that the Australian plant variety protection law is probably not compliant with existing treaty obligations and should be harmonised with the international community.

Question 10 – Preferred patentable subject matter

According to what you believe are the appropriate objectives and constraints of the patent system, what sorts of subject matters do you think should be inherently patentable and what should not?

Would your preferred content be compliant with Australia’s international obligations?

The ASF would welcome the opportunity to further consult with ACIP in relation to this matter. The ASF has already outlined a number of constraints in this submission.

Question 11 – Legislative structure

What sort of legislative structure would be appropriate to achieve your preferred content identified in Question 10?

Are any foreign structures preferred?

In principle, when should statutory provisions excluding specific subject matters be used?

Should such provisions be expanded, such as by including the exceptions from patentability allowed under TRIPS?

The ASF believes this step should be taken when the Australian Government outlines its response to the ACIP Review and in consultation with the ASF. It is difficult for the ASF to enter into a legislative debate when the views of the Australian Government and the proposed structures have not been outlined.

Question 12

Do you have any other comments?

The ASF remains very concerned that there is the misunderstanding, which has been reinforced by the views expressed in the ACIP Issues Paper that the PBR system “provided protection for plant varieties...”²¹

This is contrary to the view of plant breeders, proprietary marketers & the sowing seed industry and should be advocated by ACIP to the Australian Government.

The ASF’s priority is to achieve changes which will clarify the responsibilities of industry and if required, ultimately stop those who are willing to “take on”, and actively engage in activities outside the legal boundaries of the current plant variety protection system, to the detriment of the plant breeding sector and the plant industries more generally.

Members of the ASF are substantial investors in Australian agriculture but their investment is less than optimal, in part due to concerns over intellectual property protection.

²¹ ACIP Issues Paper – page 53

It is a technical and expensive process. ACIP has itself identified in the options paper into the Review of Enforcement of Plant Breeder's Rights that the "breeding of a new variety typically takes about 12 to 14 years".²²

Furthermore the cost of evaluation of plant materials is high as a large proportion, in some cases, >99.95% of breeding lines will be discarded from the process due to under-performance in one or more characteristics, before a viable commercial product is released

This long period between initial investment in breeding and the commercialisation of varieties, together with the high level of ongoing investment that is necessary to develop varieties to commercial release, makes plant breeding a high-risk investment for commercial companies. This is compounded by the *PBR Act*, in its current form.

The inclusion of biological matter as an innovation patentable matter is now more relevant than ever, due to:

- The exclusion in the *Innovation Patent Bill* which was implemented without industry consultation,
- The high cost of bringing varieties to the market, and
- The lack of a reasonable system of PBR enforcement under the current federal legislation.

The critical task now, is to get the right policy settings in place to protect plant breeders' intellectual property rights. This will greatly assist in providing the platform to encourage and enhance increased private investment in competitive, commercial research and development.

"...there is evidence that rates of increase in agricultural productivity are easing both in Australia and overseas".²³

The innovation patent and the *PBR Act* should therefore be viewed by ACIP as being complimentary and not competitive, and that improvements to the innovation patent will not interfere with the operations of the *PBR Act*.

The ASF recommends that ACIP and the Australian Government should immediately make changes to the relevant policies and legislation surrounding the innovation patent and the *PBR Act* to assist in promoting a profitable and competitive plant breeding industry in Australia.

A failure to act now will be to the detriment Australia's agriculture industry, its competitiveness and ultimately its future production and profitability.

"We are going to need a "revolution" in agriculture productivity over the coming decades to meet these challenges...".²⁴

ASF submission ends.

²² ACIP options paper June 2007 – page 3

²³ Dr Brian Keating - <http://www.csiro.au/news/AgSustainabilityInitiative.html> - 22 September 2008

²⁴ Dr Brian Keating - <http://www.csiro.au/news/AgSustainabilityInitiative.html> - 22 September 2008